

HE700 D.I.L. Relay Features and Benefits

Features

- Miniature dual in line package
- Choice of normally open, normally closed and change over contacts
- High voltage switching option
- Up to 2 normally open contacts
- Available with 5V, 12V or 24V coil options as standard
- Magnetic shield option
- Diode suppression option
- Diagonal coil option

Benefits

- One relay, various contacts choices reducing space and cost without compromising flexibility
- Lower power coil consumption than competing electromechanical devices.
- Hermetically sealed switching contact is immune to the effects of its environment
- Transfer moulded package gives maximum component protection

Applications

- Security
- Telecoms
- Instrumentation
- Process Control
- Industrial

DIMENSIONS (in) mm

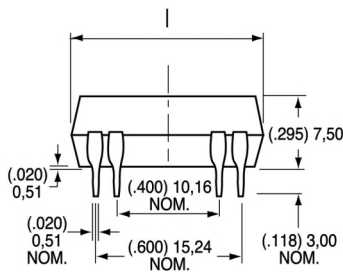


Figure 1 HE700

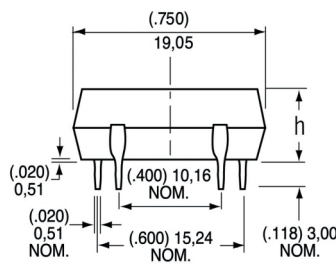


Figure 2 HE751

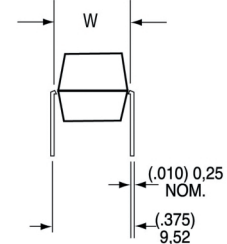
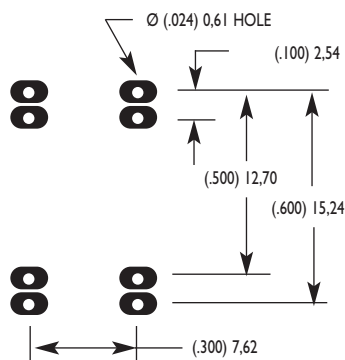


Figure 3 HE700 (All)

Table 1

| Relay Type | Body Type | l | w | h |
|------------|------------------------------------|----------------------------------|--------------------------------|--------------------------------|
| HE700 | Transfer Molded External Shield | $(.750) 19,05$ $(.795) 20,19$ | $(.285) 7,24$ $(.300) 7,62$ | $(.295) 7,50$ $(.305) 7,75$ |

HE700 PCB LAYOUT (Bottom View)



ORDERING INFORMATION

PART NUMBER HE7X X X XX XX

Model Number

- HE72 - Standard
- HE75 - High Voltage

Number of Contacts

1,2

General Options

- 00 - No Options
- 10 - Coil Suppression Diode
- 20 - Electrostatic Shield
- 30 - Coil Diode and E.S. Shield
- 40 - External Magnetic Shield
- 50 - External Magnetic Shield and Diode

Contact Type

- A - Form A (SPST-NO)
- B - Form B (SPST-NC)
- C - Form C (SPDT-CO)
- E - Form C (SPDT-CO) alternate foot print 1
- R - Form C (SPDT-CO) alternate foot print 2

Standard Coil

- 05 - 5 Volt
- 12 - 12 Volt
- 24 - 24 Volt

EXAMPLE: The HE721A0540 is a I Form relay with a 5 Volt coil and external magnetic shield

Contact the Hamlin Applications Engineering Department for low profile and other option combinations available.

See next page for: **Electrical and Operating Characteristics Description and Coil Characteristics**

Hamlin USA Tel: +1 920 648 3000 • Fax: +1 920 648 3001 • Email: sales.us@hamlin.com
 Hamlin UK Tel: +44 (0)1379 649700 • Fax: +44 (0)1379 649702 • Email: sales.uk@hamlin.com
 Hamlin Germany Tel: +49 (0) 6181 953660 • Fax: +49 (0) 6181 9536666 • Email: sales.de@hamlin.com
 Hametrol France Tel: +33 (0) 1 4687 0202 • Fax: +33 (0) 1 4686 6786 • Email: sales.fr@hamlin.com

Table 2 HE700 Series Recognised File #E47258 Electrical and Operating Characteristics @ 25°C.

| Column Number | | | 1 | 2 | 3 | 4 |
|---|--|--------------------------|----------------------------------|-------------------------------|--------------------------------|-------------------------------|
| Contact Type | | | Form A SPST, DPST Standard | Form C SPDT-CO Standard | Form A SPST High Voltage | Form B SPST-NC Standard |
| Relay Types | | | HE721, HE722 | HE721C, E, R | HE751 | HE721 |
| CONTACT RATINGS Contact Hamlin for specific load/life details | Power, Switching | Watt - max. | 10 | 5 | 10 | 10 |
| | Voltage, Switching | Vdc - max. | 200 | 175 | 300 | 200 |
| | Current, Switching | A - max. | 0.5 | 0.25 | 0.5 | 0.5 |
| | Current, Carry | A - max. | 1.2 | 1.5 | 1.2 | 1.2 |
| VOLTAGE HOLD-OFF | Across Open Contacts | Vdc - min. | 250 | 200 | 450 | 250 |
| | Contacts to Coil | Vac - min. | 500 | 500 | 2500 | 500 |
| | Coil to E. Shield | Vac - min. | 150 | 150 | N/A | N/A |
| | Between Isolated Terminals | Vac - min. | 500 | N/A | N/A | N/A |
| RESISTANCE | Contact, Initial | Ω - max. | 0.150 | 0.200 | 0.150 | 0.150 |
| | Insulation: Across Open Contacts Between Isolated Terminals | Ω - min. | 10 ¹⁰ | 10 ⁹ | 10 ¹⁰ | 10 ¹⁰ |
| | | Ω - min. | 10 ¹⁰ | 10 ¹⁰ | 10 ¹⁰ | 10 ¹⁰ |
| TIMING | Operate Time | ms - max. | 1.0 | 3.0 | 1.0 | 1.0 |
| | Release Time | ms - max. | 1.0 | 3.0 | 1.0 | 1.0 |
| ENVIRONMENTAL | Temperature, Operating | °C | -40 to +85 | -40 to +85 | -20 to +85 | -40 to +85 |
| | Temperature, Storage | °C | -40 to +105 | -40 to +105 | -40 to +105 | -40 to +105 |
| | Vibration Resistance | G - max. 10-2000 Hz. | 20 | 20 | 20 | 20 |
| | Shock Resistance | G - max. 11 ms, 1/2 sine | 50 | 50 | 50 | 50 |

Table 3 HE700 Series Miniature Relay Coil Characteristics @ 25°C.

| Contact Form | Electrical & Operating Characteristics | Dimensions | Part Number | Nominal Coil Voltage Vdc | Coil Resistance $\pm 10\%$ Ohms | Must Operate Vdc | Must Release Vdc | Maximum Coil Voltage Vdc | Top View 2,54 mm, 0.1 in. Grid Dot on Case: Pin 1 Numbers not printed on case. |
|-------------------------------|--|------------|-------------|--------------------------|---------------------------------|------------------|------------------|--------------------------|--|
| 1A SPST-NO | See Table 2 Column 1 | Figure 1 | HE721A0500 | 5 | 500 | 3.75 | 0.5 | 12 | |
| | | | HE721A1200 | 12 | 1000 | 8.0 | 1.0 | 31 | |
| | | | HE721A2400 | 24 | 2150 | 16.0 | 2.0 | 46 | |
| 1B SPST-NC | See Table 2 Column 4 | Figure 1 | HE721B0500 | 5 | 500 | 3.75 | 0.5 | 6.5 | |
| | | | HE721B1200 | 12 | 500 | 9.0 | 1.0 | 14 | |
| | | | HE721B2400 | 24 | 2150 | 18.0 | 2.0 | 28 | |
| 1C SPDT-CO | See Table 2 Column 2 | Figure 1 | HE721C0500 | 5 | 200 | 3.75 | 0.5 | 14 | |
| | | | HE721C1200 | 12 | 500 | 8.0 | 1.0 | 22 | |
| | | | HE721C2400 | 24 | 2000 | 16.0 | 2.0 | 44 | |
| 1C SPDT-CO | See Table 2 Column 2 | Figure 1 | HE721E0500 | 5 | 200 | 3.75 | 0.5 | 14 | |
| | | | HE721E1200 | 12 | 500 | 8.0 | 1.0 | 22 | |
| | | | HE721E2400 | 24 | 2000 | 16.0 | 2.0 | 44 | |
| 1C SPDT-CO | See Table 2 Column 2 | Figure 1 | HE721R0500 | 5 | 200 | 3.75 | 0.5 | 14 | |
| | | | HE721R1200 | 12 | 500 | 8.0 | 1.0 | 22 | |
| | | | HE721R2400 | 24 | 2000 | 16.0 | 2.0 | 44 | |
| 2A DPST-NO | See Table 2 Column 1 | Figure 1 | HE722A0500 | 5 | 200 | 3.75 | 0.5 | 12 | |
| | | | HE722A1200 | 12 | 500 | 8.0 | 1.0 | 22 | |
| | | | HE722A2400 | 24 | 2150 | 16.0 | 2.0 | 46 | |
| 1A SPST-NO High Voltage | See Table 2 Column 3 | Figure 2 | HE751A0500 | 5 | 500 | 3.75 | 0.5 | 12 | |
| | | | HE751A1200 | 12 | 1000 | 8.0 | 1.0 | 31 | |
| | | | HE751A2400 | 24 | 2150 | 16.0 | 2.0 | 46 | |

- Notes:
- 1) The HE 700 Series is also available in low profile with (.225) 5.72mm height. Contact Hamlin for details.
 - 2) HE721B - Exceeding recommended voltage may cause contact closure.
 - 3) Optional external magnetic shield not available on Form B relays.

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